# V8

## Composite Video Controller

ELAN® HOME SYSTEMS

# Preface

## Purpose of This Manual

This manual provides step-by-step installation instructions and connection examples, along with basic user information for installation and ongoing use of the V8 Composite Video Controller. This manual is written for the installer of this equipment.

### Organization

The following information is contained in this manual:

| | |
|---|---|
| **Safety Information** | Provides a comprehensive list of safety practices and procedures allowing for the safe installation and operation of ELAN Home Systems' V8 Composite Video Controller. |
| **V8 Introduction** | Provides an introduction to the V8 Composite Video Controller, along with system features to include Front and Rear panel controls, indicators and connections, along with a short description of each. |
| **V8 System Design Overview** | Provides a system design application overview of the V8 Composite Video Controller for use in video applications. |
| **V8 Connections** | Provides a description of V8 Composite Video Controller connections including connections made with ELAN Multi-Room Systems and direct connections with the V8 Composite Video Controller from other components. |
| **Troubleshooting** | Provides troubleshooting tables to help fix common discrepancies that may be associated with the V8 Composite Video Controller. |
| **Specifications** | Appendix A provides equipment specifications for the V8 Composite Video Controller. |
| **Rack Mounting** | Appendix B provides specifications for Rack Mounting of the V8 Composite Video Controller using the included rack mount brackets. |
| **RS-232 Protocol** | Appendix C contains all information necessary to create RS-232 command structures when controlling the V8 Composite Video Controller with a third-party RS-232 control device. |
| **Digital Audio** | Appendix D provides a system design application overview of the V8 Composite Video Controller for use in Digital Audio switching applications. |

© ELAN Home Systems 2009 • All rights reserved.

# WARNING

RISK OF ELECTRIC SHOCK
DO NOT OPEN!

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

CAUTION: RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instruction in the literature accompanying the appliance.

WARNING: TO REDUCE THE RISK OF FIRE OR SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

# CAUTION

# IMPORTANT SAFETY INFORMATION

**Read Information**—All the safety and operating information should be read before the appliance is operated.

**Follow Information**—All operating and use information should be followed.

**Retain Information**—The safety and operating information should be retained for future reference.

**Heed Warnings**—All warnings on the appliance and in the operating instructions should be heeded.

**Wall Mounting**—Mounting of this appliance should be done only by an authorized installer.

**Ventilation**—The appliances should be situated so that their location or position does not interfere with their proper ventilation.
—These appliances should never be placed near or over a radiator or heat register.
—These appliances should not be placed in a built-in installation such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.

**Non-Use Periods**—Appliances that are left unattended and unused for long periods of time should be de-energized.

**Power Sources**—The appliances should be connected to a power supply only of the type described in the operating instructions or as marked on each appliance. If you are not sure of the type of power supply to your home, consult your authorized ELAN dealer or local power company.

**Grounding or Polarization**—Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one blade wider than the other blade. A grounding type plug has two blades and a third grounding prong. The polarized wide blade and the third prong are provided for your safety. If the provided plug does not fit your outlet, consult an electrician for replacement of the obsolete outlet.

**Water and Moisture**—To reduce the risk of electric shock or fire, these appliances should not be used near water—for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool.

**Power Cord Protection**—Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles and the point where they exit from the apparatus.

**Telephones**—Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electrical shock from lightning. Do not use a telephone to report a gas leak if the leak is in the vicinity of the ELAN electronic equipment because of risk of fire or explosion.

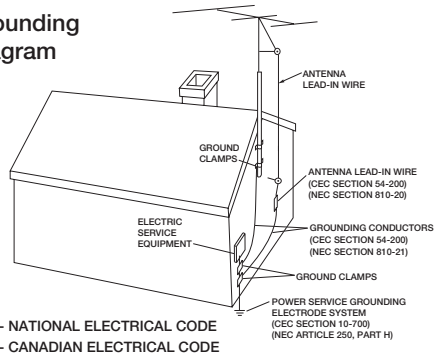

© ELAN Home Systems 2009 • All rights reserved.

**Cleaning**—Unplug the apparatus from the power outlet before cleaning. Use only a dry cloth to clean the apparatus.

**Power Lines**—An outdoor antenna should be located away from power lines. When installing an outside antenna system, extreme care should be taken to avoid touching power lines or circuits, as contact with them may be fatal.

**Outdoor Antenna Grounding**—If an outside antenna or cable system is connected to these audio products, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Section 810 of the U.S. National Electrical Code, and Section 54 of the Canadian Electrical Code, provide information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See the grounding diagram (right).

Grounding Diagram


ANTENNA LEAD-IN WIRE
GROUND CLAMPS
ANTENNA LEAD-IN WIRE (CEC SECTION 54-200) (NEC SECTION 810-20)
ELECTRIC SERVICE EQUIPMENT
GROUNDING CONDUCTORS (CEC SECTION 54-200) (NEC SECTION 810-21)
GROUND CLAMPS
POWER SERVICE GROUNDING ELECTRODE SYSTEM (CEC SECTION 10-700) (NEC ARTICLE 250, PART H)

NEC - NATIONAL ELECTRICAL CODE
CEC - CANADIAN ELECTRICAL CODE

**Overloading**—Do not overload wall outlets and extension cords, as this could result in fire or electric shock.

**Object and Liquid Entry**—Never insert objects of any kind through the openings of these appliances, as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Care should be taken so that objects do not fall and liquids are not spilled into the appliance through openings in the enclosure.

**Servicing**—Do not attempt to service these appliances yourself, as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

**Damage Requiring Service**—These appliances should be serviced by qualified service personnel when:

- A power supply connection or a plug has been damaged or
- If liquid has been spilled into the appliance or objects have fallen into the appliance or
- The appliance has been exposed to water or moisture or
- The appliance does not appear to operate normally or exhibits a marked change in performance or
- The appliance has been dropped or the enclosure damaged.

**Replacement Parts**—When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards. The Master Control Unit battery should be replaced only after turning the power off and only by an authorized installer.

**Safety Check**—Upon completion of any service or repairs to this audio product, ask the service technician to perform safety checks to determine that the audio product is in proper operating condition.

**Lightning Storms**—Unplug this apparatus during lightning storms or when unused for long periods of time.

**Attachments and Accessories**—Use only attachments/accessories specified by the manufacturer.

**Cart, Stand, Tripod, Bracket or Table**—Use only with a cart, stand, tripod, bracket or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip over.

**Disconnect Device**—Where the mains plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain operable.

© ELAN Home Systems 2009 • All rights reserved.

© ELAN Home Systems 2009 • All rights reserved.

# Table of Contents

**Purpose of This Manual** ..... I
**Organization** ..... I
**Safety Information** ..... II

**Chapter 1:** *Introduction*

**Introduction** ..... 1
**V8 Features** ..... 1
**V8 Functions & Indicators** ..... 2
Front Panel ..... 2
Rear Panel ..... 3

**Chapter 2:** *V8 System Design Overview*
**System Design** ..... 4
Pre-Wire ..... 5
**Applications** ..... 5
Stand-Alone Applications ..... 5
Stand-Alone Basic ..... 5
Stand-Alone Advanced ..... 6
S66A Application ..... 7
S86A Application ..... 8
S128P Application ..... 9

**Chapter 3:** *V8 Connections*

**Connectivity** ..... 10
Composite IN/OUT ..... 11
IR Input (Rear) ..... 11
IR Output (Rear) ..... 12
RS-232 ..... 12
Multiple Chassis ..... 14
Loop Outputs ..... 14
RS-232 ..... 15
VIANET ..... 15

**Chapter 4:** *Operations and Settings*
DIP Settings ..... 16
Unit I.D. Settings ..... 16
Front Panel Display ..... 17
BAUD Rate Settings ..... 17
IR Power Settings ..... 18
**Chapter 5:** *Troubleshooting* ..... 19

**Appendix A: Specifications** ..... 22

**Appendix B: Rack Mounting** ..... 23

**Appendix C: Programming** ..... 24

**Appendix D: Digital Audio** ..... 28

**Warranty** ..... Back Page

© ELAN Home Systems 2009 • All rights reserved.

# V8

## Composite Video Controller

### Items in package:

- V8 Composite Video Controller
- Rack Mount Brackets
- Power Cord
- Installation Manual


© ELAN Home Systems 2009 • All rights reserved.

# Chapter 1: Introduction

The ELAN V8 Composite Video Controller is designed to provide a reliable, affordable solution for multi-room systems requiring up to eight composite video signals to any of eight outputs and can be expanded to send composite video signals to thirty two locations.

### The ELAN Story

Located in Lexington, KY, USA, ELAN Home Systems has designed innovative multi-room audio/video systems since 1989. ELAN was the first to integrate music, intercom and tv distribution features that used the homeowner's stereos, telephones, and televisions to create the whole-house entertainment experience. These systems allow people to move freely from room to room, controlling centrally located equipment with ease.

With a current catalog of over 600 items and having been honored with many prestigous industry awards, ELAN is considered by many to be the leader in whole-house distributed audio/video systems.

## V8 Features

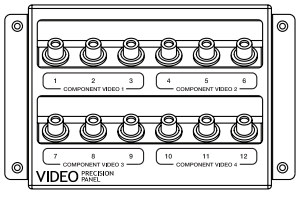
- **8 X 8 Composite Video Controller**
- **Expandable to 8 X 32**
- **RS-232 Controllable**
- **IR Controllable**
- **VIANET Controllable**
- **Rear VIANET IN/OUT Ports**
- **Rear IR IN/IR OUT Ports**
- **Rear RS-232 Input and Output Ports**
- **Buffered Loop Outputs for Sharing Sources**

## Available in 240 Volt Version

## cTUVus Certified, CE®, and C-tick

### Safety Concerns

Use only grounded outlets when powering this product. Making any modification to the power cord could cause unsafe operation and will void the manufacturer's warranty.




ELAN Precision Panels save time and make sense out of complex wiring jobs!

© ELAN Home Systems 2009 • All rights reserved.

## V8 Functions and Indicators

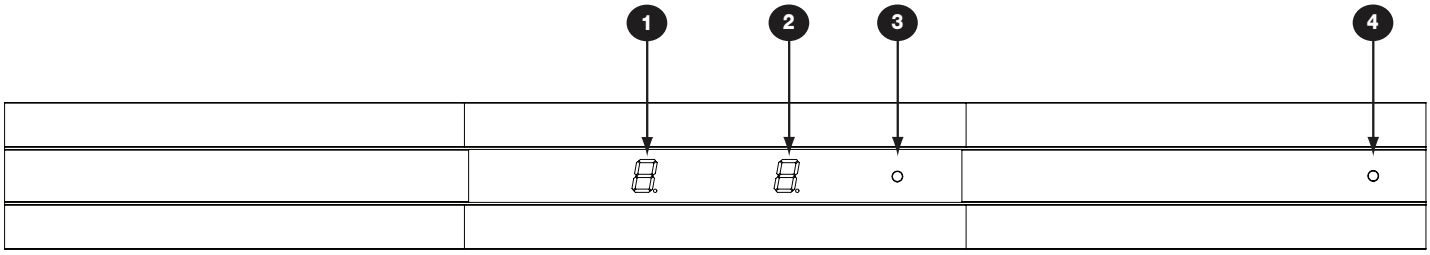



*Figure 1-1: V8 Front Panel*

*Table 1-1:Front Panel*

| Item | Function |
|---|---|
| 1 | VIDEO OUTPUT LED - Displays Blue (1-8) Numeric Indication |
| 2 | VIDEO INPUT LED - Displays Blue (1-8) Numeric Indication |
| 3 | IR INDICATOR LED - Glows Green When Any IR signal is received |
| 4 | POWER LED - Glows Blue When Power Switch is ON and Unit Plugged In |


© ELAN Home Systems 2009 • All rights reserved.

## V8 Rear

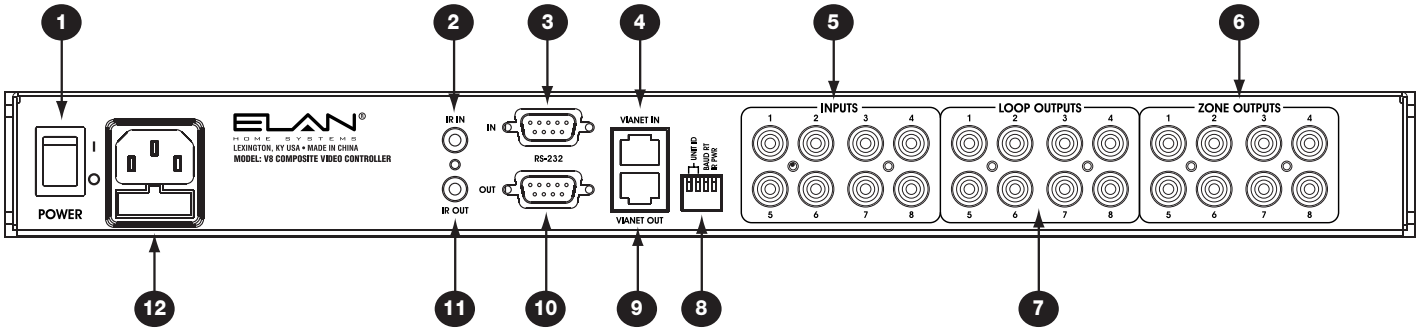



*Figure 1-2: V8 Rear Panel*

*Table 1-2: Rear Panel*

| Item | Function |
|---|---|
| 1 | POWER SWITCH |
| 2 | IR IN 3.5mm jack |
| 3 | RS232 IN DB9 jack |
| 4 | VIANET IN RJ45 jack |
| 5 | RCA Video INPUTS (8) |
| 6 | RCA Video OUTPUTS (8) |
| 7 | RCA Video LOOP OUTPUTS (8) |
| 8 | DIP Switches (UNIT ID, BAUD Rate, IR Power) |
| 9 | VIANET OUT RJ45 jack |
| 10 | RS232 OUT DB9 jack |
| 11 | IR OUT 3.5mm mono jack |
| 12 | Power Cord Connector/FUSE (REPLACE WITH 200 mA FUSE) |

© ELAN Home Systems 2009 • All rights reserved.

# Chapter 2. System Design & Applications

## System Design

The first step to a good design is to map the system. It is advisable to mark up a copy of the house floor plan with speaker, keypad, touch panel, volume control, and equipment locations etc. Make sure that all locations are decided upon before pre-wiring commences so that all necessary wiring and installation hardware is in place. This unit will be interfacing with other components such as multi-room controllers, source components, communications controllers, serial controllers, and user interfaces, so it is essential that ALL system components are accounted for prior to the pre-wire stage.

Secondly, make a detailed list of all components. Include source equipment, keypads, touch panels, volume controls, amplifiers, and communications gear. Be sure to include necessary electrical boxes, structured wiring enclosures, telephone lines, rough-in brackets, patch cords, power supplies, etc.

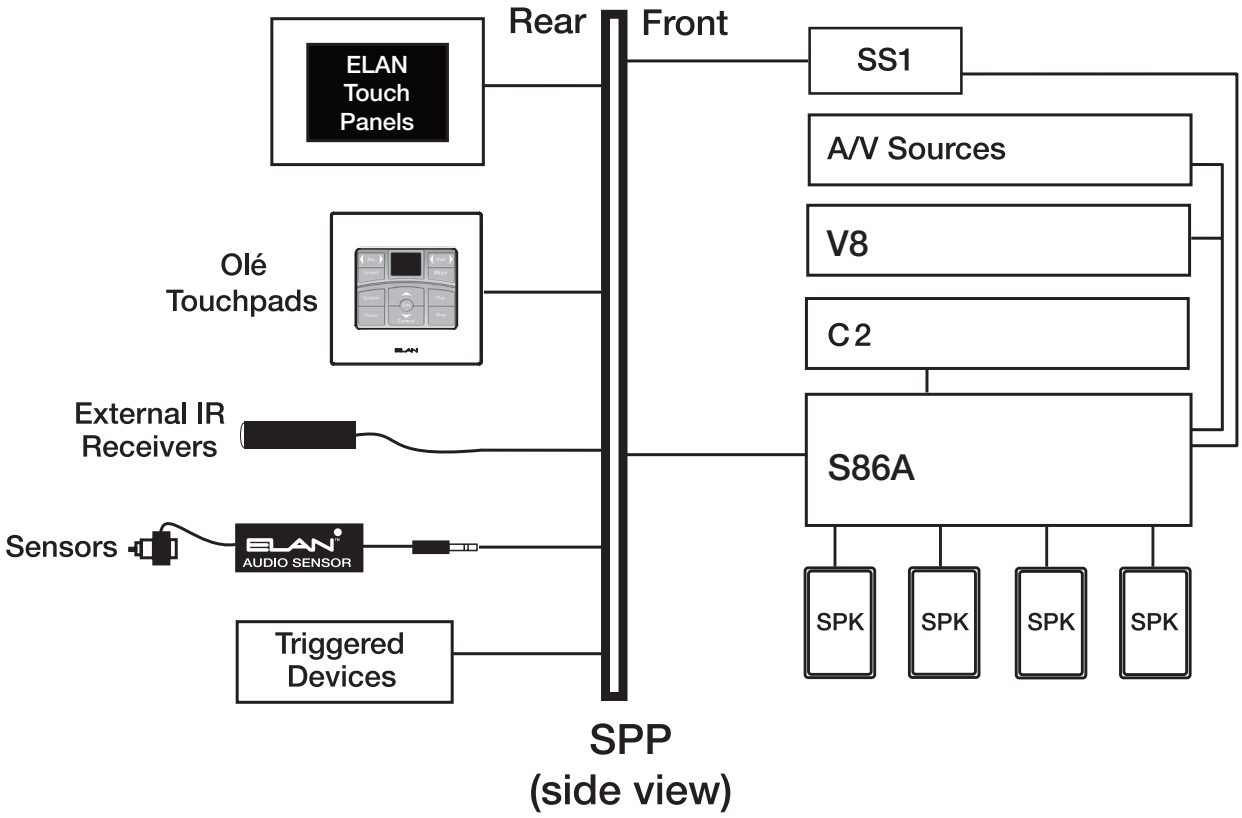
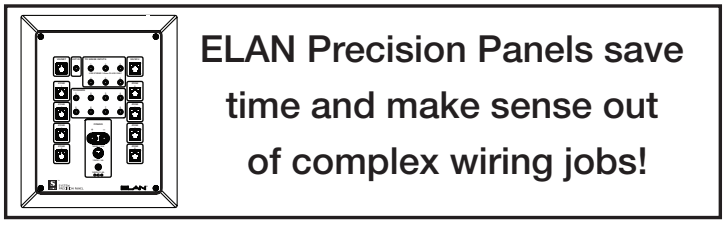



*Figure 2-1: System Design*





© ELAN Home Systems 2009 • All rights reserved.

## Pre-Wire

### WIRING CONSIDERATIONS

| Item | Description |
|---|---|
| Video | RCA Video Patch Cables |
| RS232 | DB9 Cables |
| IR | 2 Conductor Wire w/ 3.5mm mono connector |
| VIANET | CAT5 RJ45 to RJ45 wired to ELAN Standard Pinout |

***This section describes typical applications using the V8 in video distribution installations. These are all basic in nature and should be used for guideline purposes only. Each application can be augmented as needed for individual circumstances. This section is for overall design purposes. Please see Chapter 3: V8 Connections for specific wiring configurations.***

# Stand-Alone Systems

## Basic Stand-Alone System

The diagram below shows a basic stand-alone system that utilizes the V8 to switch composite video sources to televisions located throughout the home. A stand-alone system is one in which an ELAN multi-room preamp controller is *not* used.

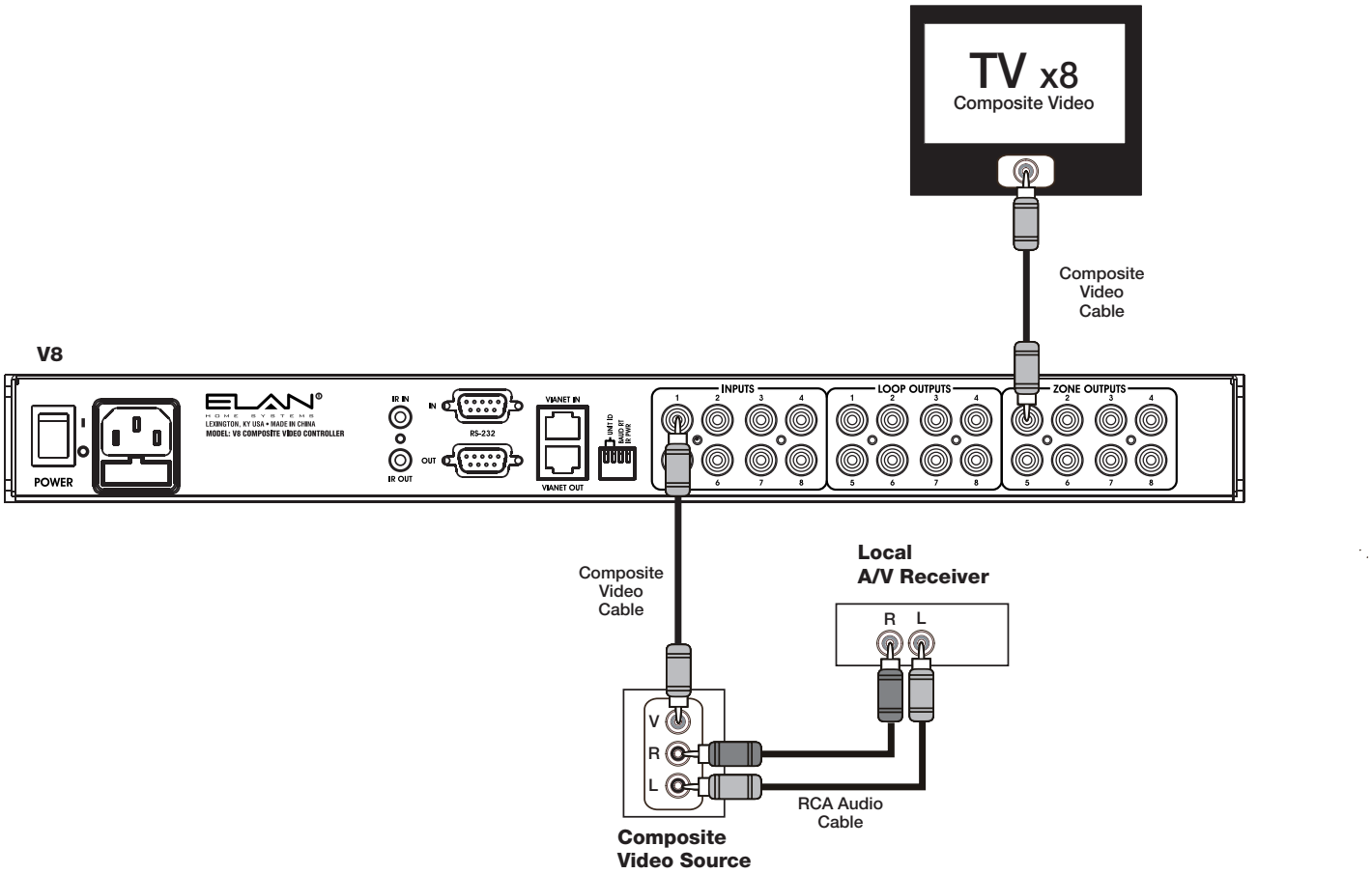



*Figure 2-2: Stand-Alone Composite Switching*

© ELAN Home Systems 2009 • All rights reserved.

## Advanced Stand-Alone System

The ELAN V8 is capable of switching composite camera signals in systems that use CCTV video sources. Individual camera sources can be used with multiple V8s to create a complex surveillance application. The application below shows a stand-alone system with a VIA!®Quad switching CCTV video sources to a combination of TVs. The use of the VIA!Quad allows more inputs to be available for video sources such as DVD, Satellite, Cable, and Digital Video Servers.

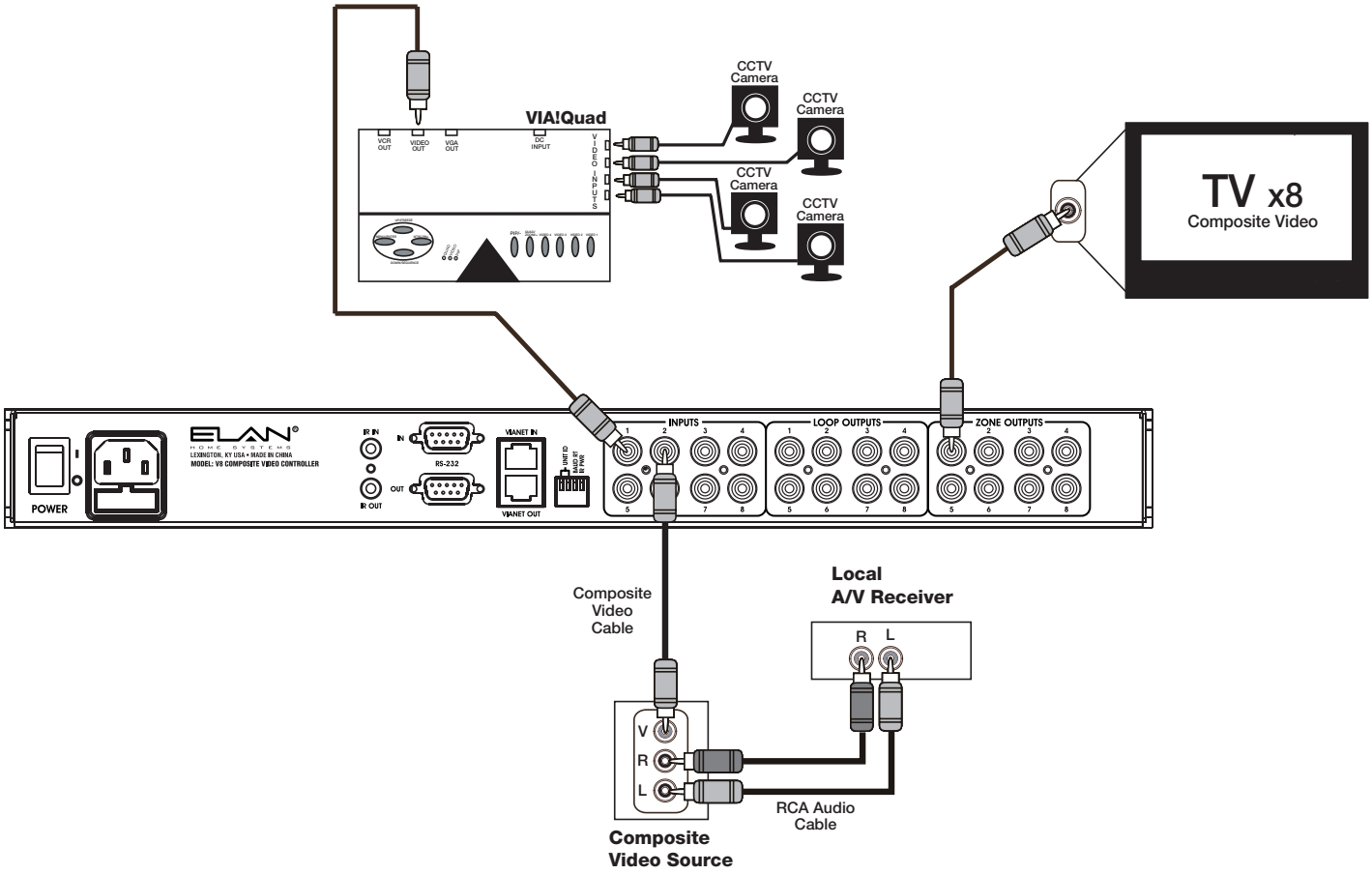



*Figure 2-3: Stand-Alone w/CCTV Switching*


© ELAN Home Systems 2009 • All rights reserved.

# ELAN Multi-Room Controller-Based Systems

There are many possible applications when using the V8 in ELAN Multi-Room Controller-based systems. This section shows basic concepts that can be combined or arranged according to the needs of the exact system being installed.

## V8/S66A

When utilizing a S66A Integrated Multi-Room Controller, the V8 can be an economical and versatile video switching solution. In this application, the S66A routes analog audio and performs IR distribution and amplification functions. The V8 routes composite video (DVD, Satellite, and VIA!Quad w/ cameras) sources to TVs and to ELAN Touch Panels.

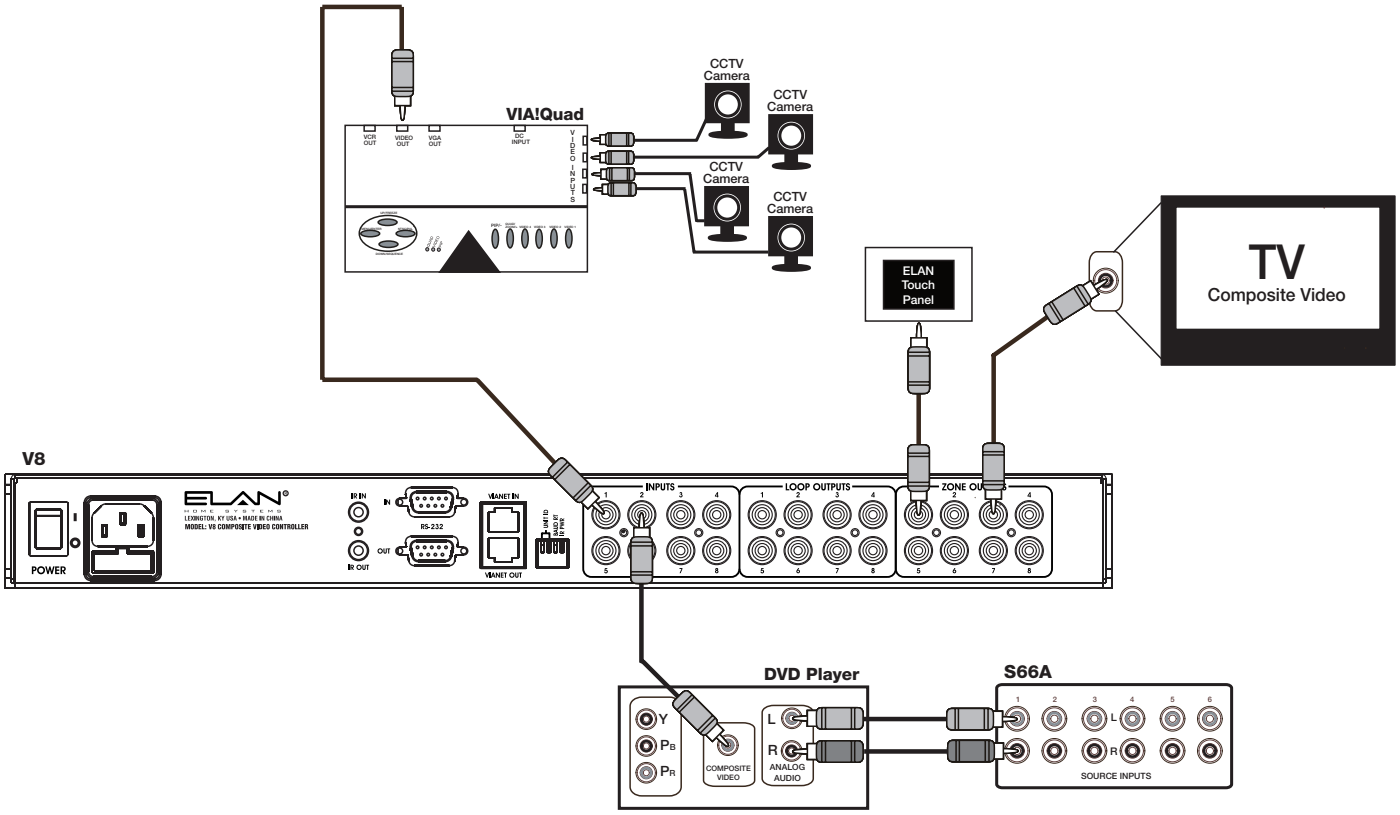



*Figure 2-4: V8 and S66A*

© ELAN Home Systems 2009 • All rights reserved.

## V8/S86A or S86P

This application shows an S86P Multi-Room Controller performing audio distribution functions as well as composite video switching. The use of the V8 allows the S86P to send any or all Loop Outputs to the V8 so that composite video outputs can be sent to more ELAN Touch Panels and TVs.

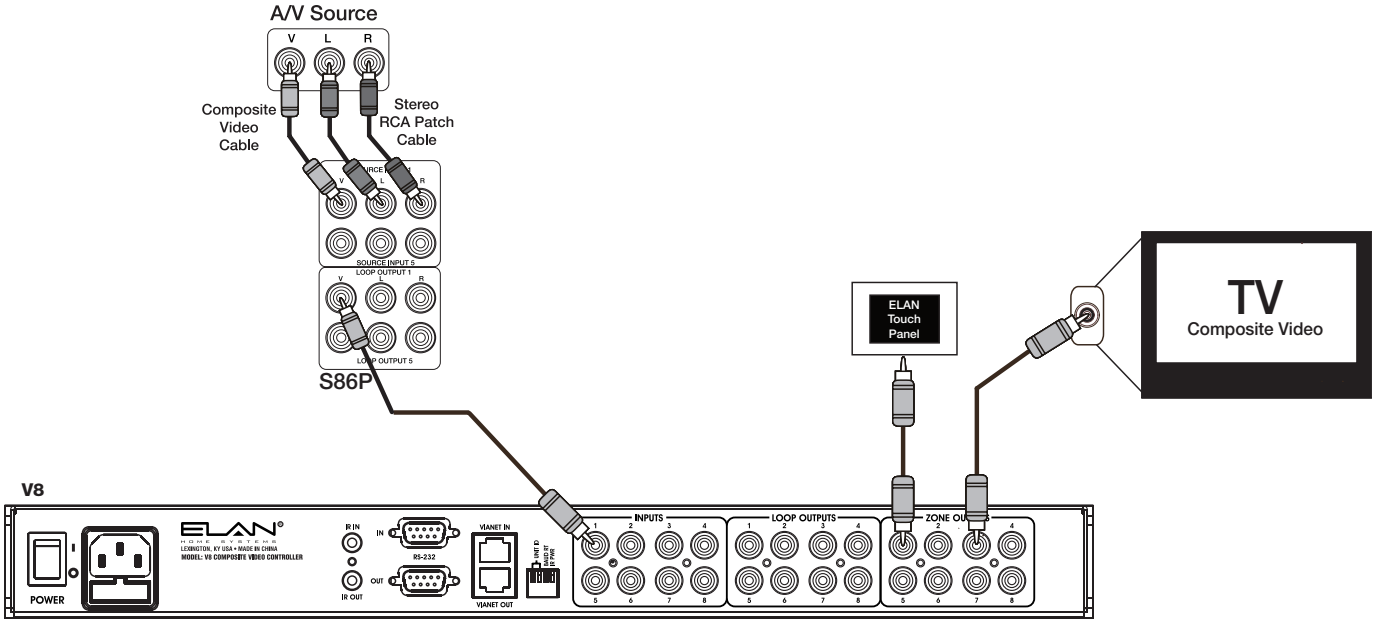



*Figure 2-5: V8 and S86P*


© ELAN Home Systems 2009 • All rights reserved.

## V8/S128P

This application shows an S128P Multi-Room Controller performing audio distribution functions as well as component video switching. The use of the V8 allows composite video output routing (DVD, Satellite, and VIA!Quad w/ cameras) so that composite video outputs can be sent to ELAN Touch Panels and TVs.

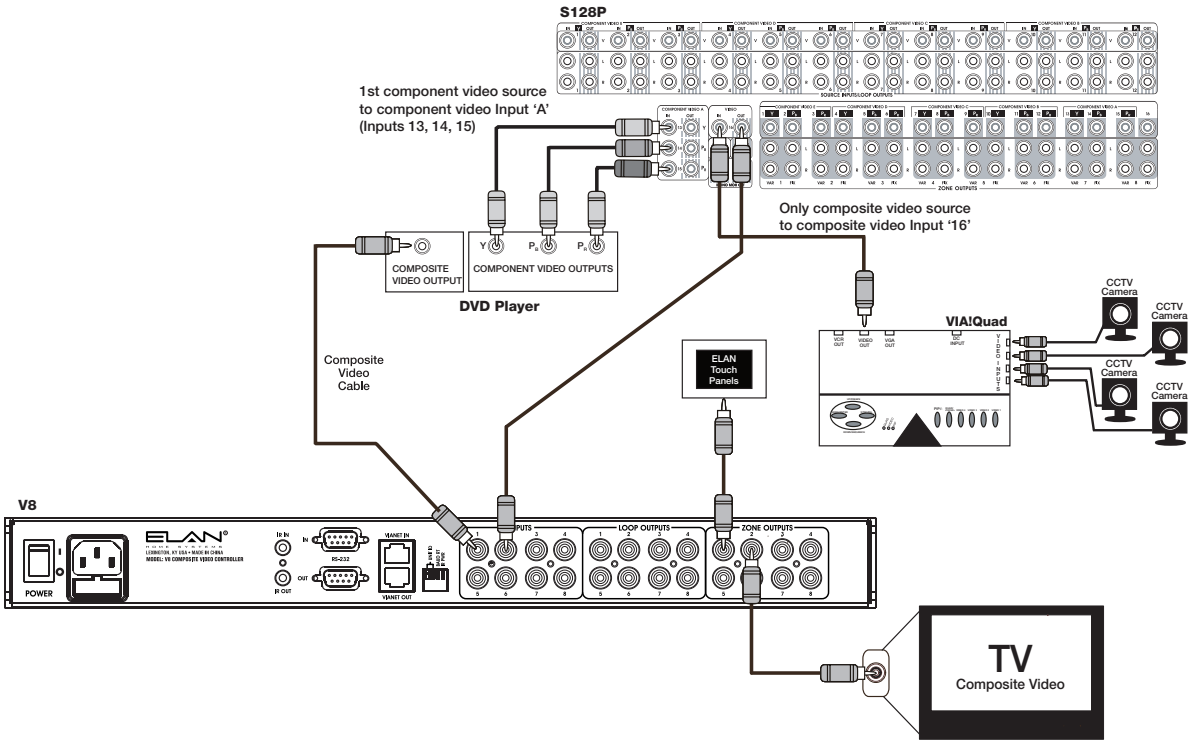



*Figure 2-6: V8's and S128P*

© ELAN Home Systems 2009 • All rights reserved.

# Chapter 3: Connections

## Composite INPUT/ZONE OUTPUT

Use high-quality composite video cables to make connections between sources and the V8's inputs. Sources will typically be located near the V8 at the head-end of the system. Composite video outputs will typically be sent via coaxial cable from the head-end to televisions, monitors and/or ELAN Touch Panels located throughout the house.

***Note: ELAN recommends using RG-59 or RG-6 with a copper braid and a solid copper center conductor.***

### PV12 Video Precision Panel

The PV12 Video Precision Panel provides a clean and easy way to connect up to 12 runs of coaxial cable to the V8 Video Controller. Twelve gold-plated F-to-RCA barrel connectors are mounted on flanges angled at 45 degrees. The angled flanges ensure that all coax runs slide easily back into the wall after termination, and that the cables are not bent past their specified limits, which can cause damage resulting in signal loss. The PV12 is one of ELAN's 'half-frame' Precision Panels. Two 'half-frame' panels can be mounted in one PF2 Precision Panel Frame, giving you the flexibility to mix and match the Precision Panels needed to complete a neat, problem-free trim-out. Two PV12s can be mounted in one frame to accommodate the 24 video connections of the V8.

Use F-to-RCA adaptors to connect high quality composite video cables to each TV, monitor or ELAN Touch Panel.

***Note: Maximum coaxial wire run is 300 feet.***

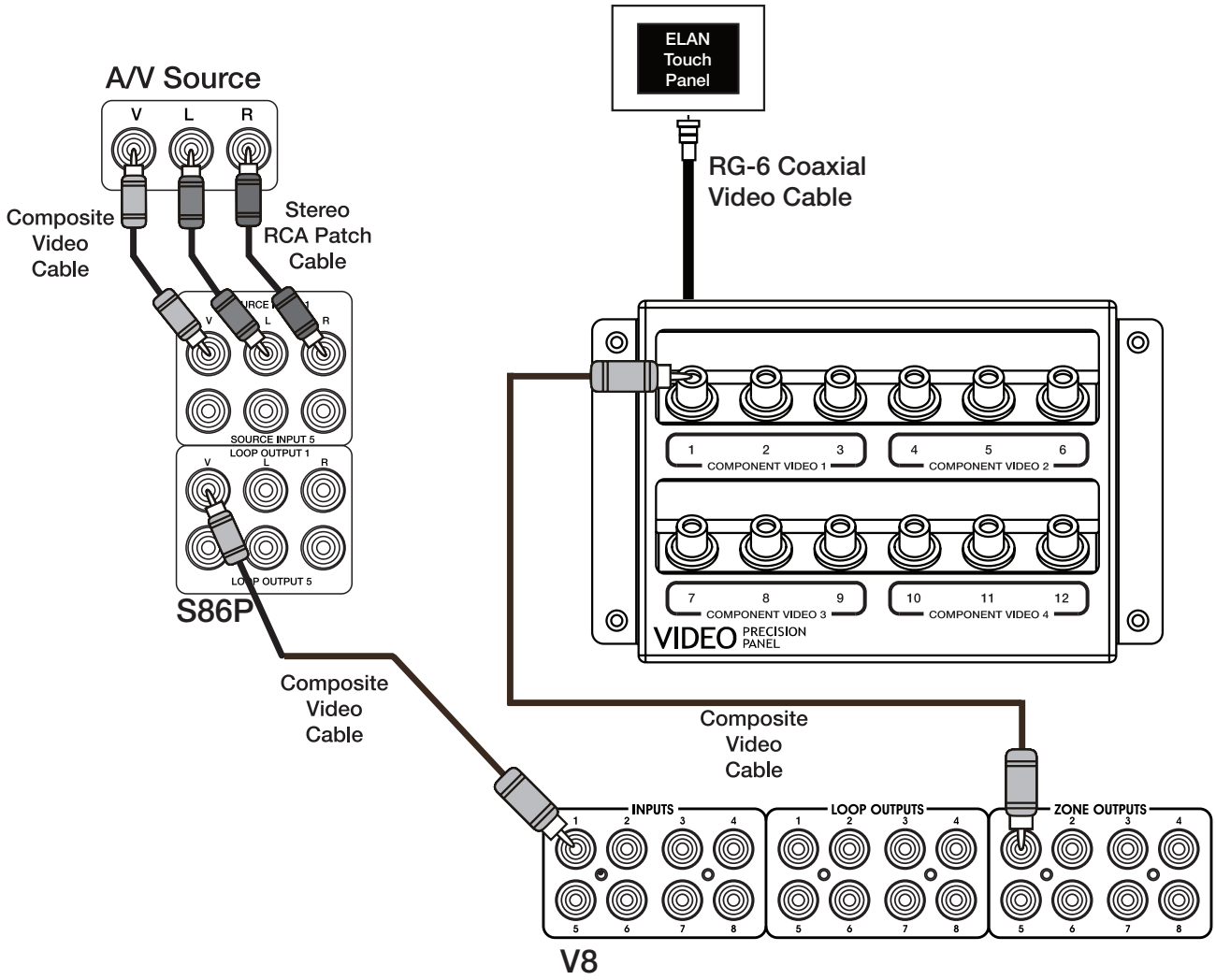



*Figure 3-1: Video Connections*


© ELAN Home Systems 2009 • All rights reserved.

## Control Connections - IR

There are two ways to send IR to the V8 using the 3.5mm IR IN port. The IR OUT port passes any IR signal that is sent to the V8's IR IN port.

### IR IN Port

Most ELAN multi-room applications will utilize the rear IR IN port for IR control. Use a 3.5mm mono interconnect cable to connect between an IR OUT port (typically an 'ALL' port) of an ELAN multi-room controller and the IR IN port of the V8. In this configuration, any IR signal sent from any zone of the multi-room system will be sent to the V8.

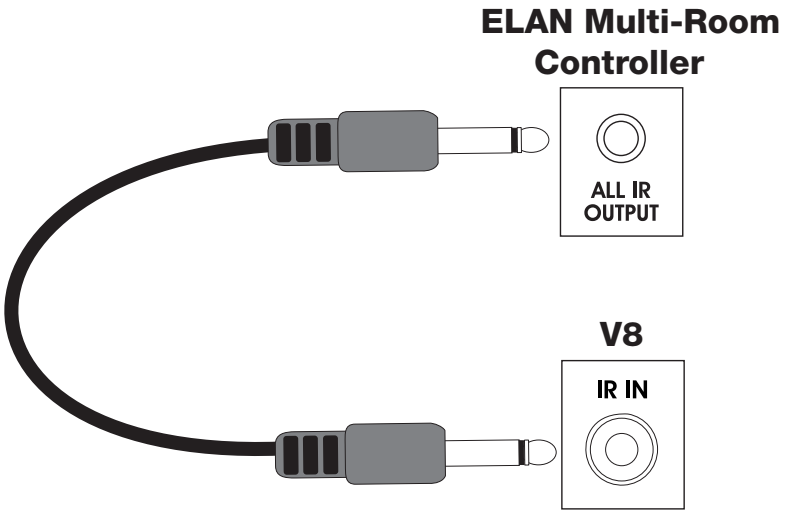



*Figure 3-2: IR IN*

An IR Receiver such as the ELAN IRS5 may be plugged directly into the V8 to allow for individual room control or system-wide control using V8 discrete IR codes. See ***Figure 4-4: IR PWR DIP Settings*** to enable IR Receiver Power.

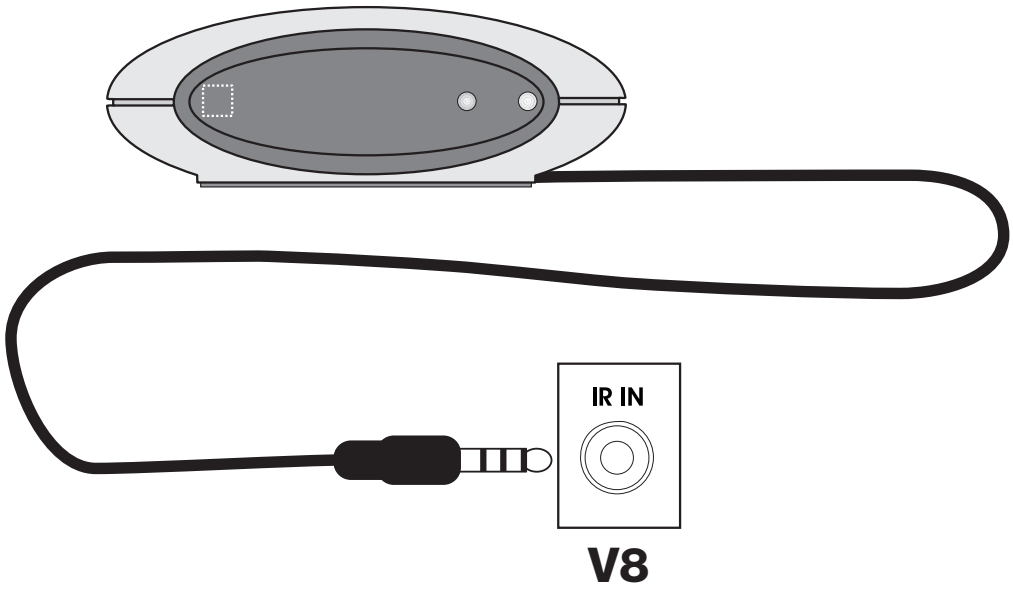



*Figure 3-3: IR IN using ELAN IRS5*

© ELAN Home Systems 2009 • All rights reserved.

### IR OUT Port

Any IR signal that is sent into the V8 through the IR IN port may be passed out of the IR OUT port. Use the IR OUT port to link multiple V8s or as a convenient way to send signals to additional IR controlled devices.

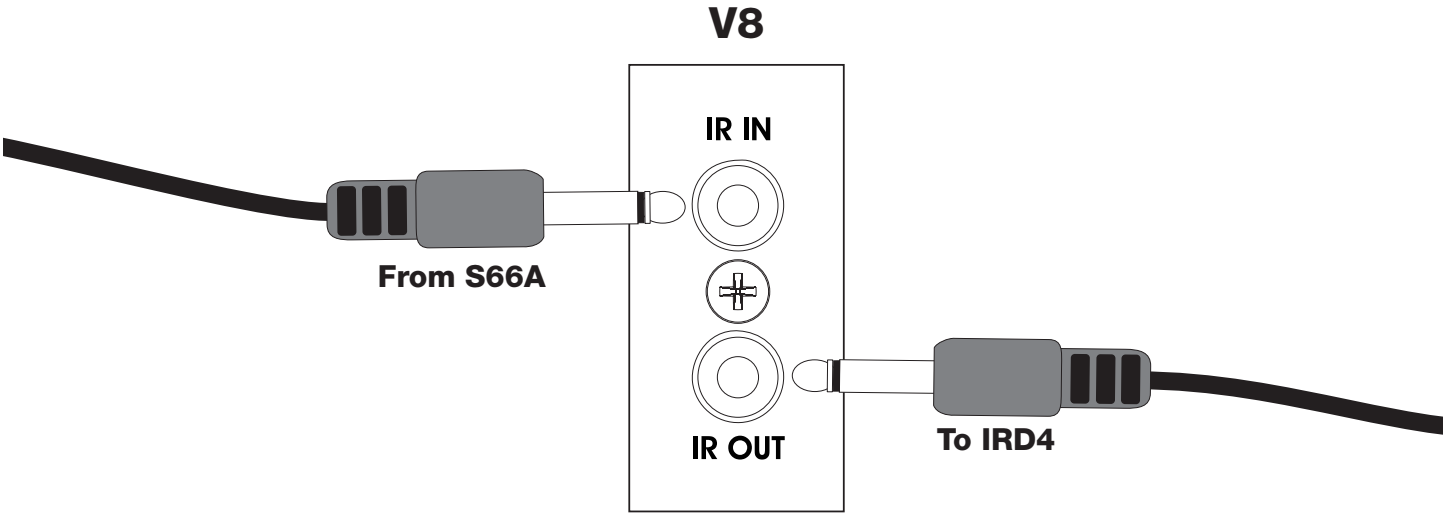



*Figure 3-4: IR Out Configuration*

## RS-232

Use the SERIAL PORTS when a computer or third-party RS-232 controller will be used to control the V8. When using ELAN devices like the SS1, SC-1, or ELAN Touch Panels, it is best to use VIANET to control the V8.

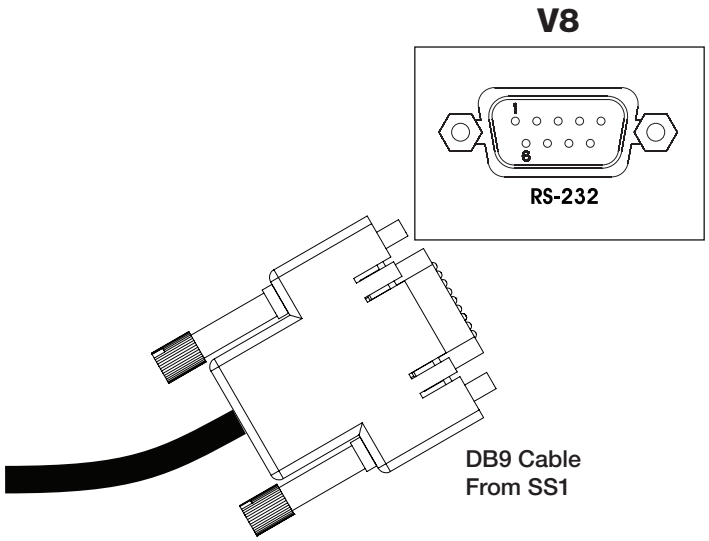



*Figure 3-5: RS-232*


© ELAN Home Systems 2009 • All rights reserved.

## AC Power Connector

A removable IEC compatible AC Power cord is included for connecting the V8 AC Power Connector to 120VAC or 240VAC power. A 200 mA fuse holder is located below the receptacle.

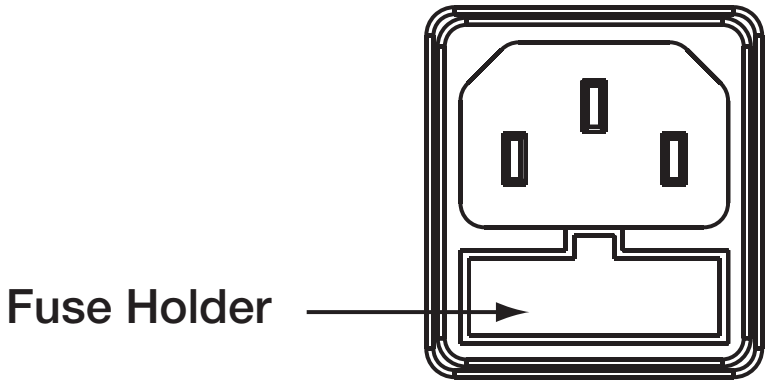
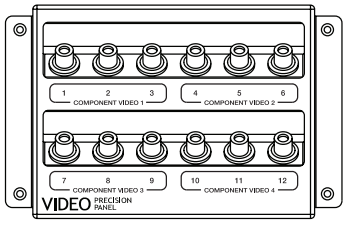



*Figure 3-6: AC Power Connector*




ELAN Precision Panels save time and make sense out of complex wiring jobs!

© ELAN Home Systems 2009 • All rights reserved.

## Multi-Chassis

Multiple V8s can be configured to support an 8 input by 32 output switching matrix. The following section describes the connections necessary for this application. See ***Figure 4-1*** for information regarding the setting of chassis identification DIP Switches.

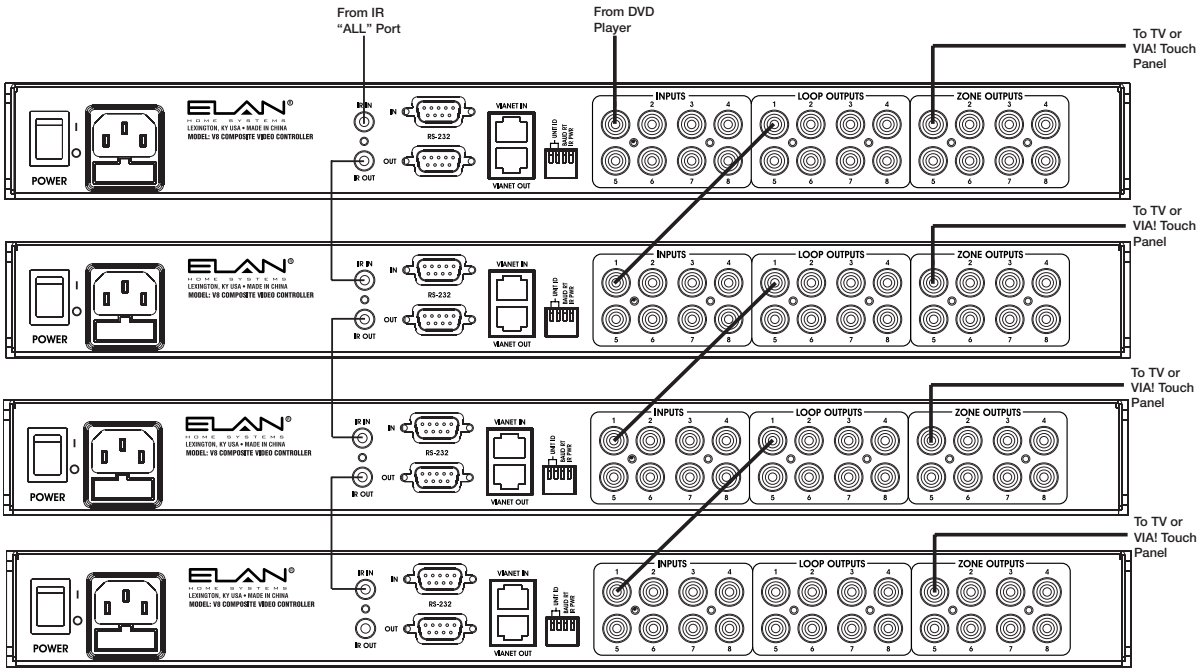



*Figure 3-7: Multiple V8 Chassis*

## Loop Output

Use RCA Video cables to connect a source to V8 #1. Use additional cables to add additional chassis, as shown in ***Figure 3-8***. Route cables from each source's LOOP OUTPUT of V8 #1 to the corresponding SOURCE INPUT of V8 #2. Follow this pattern through V8 #4, if applicable.

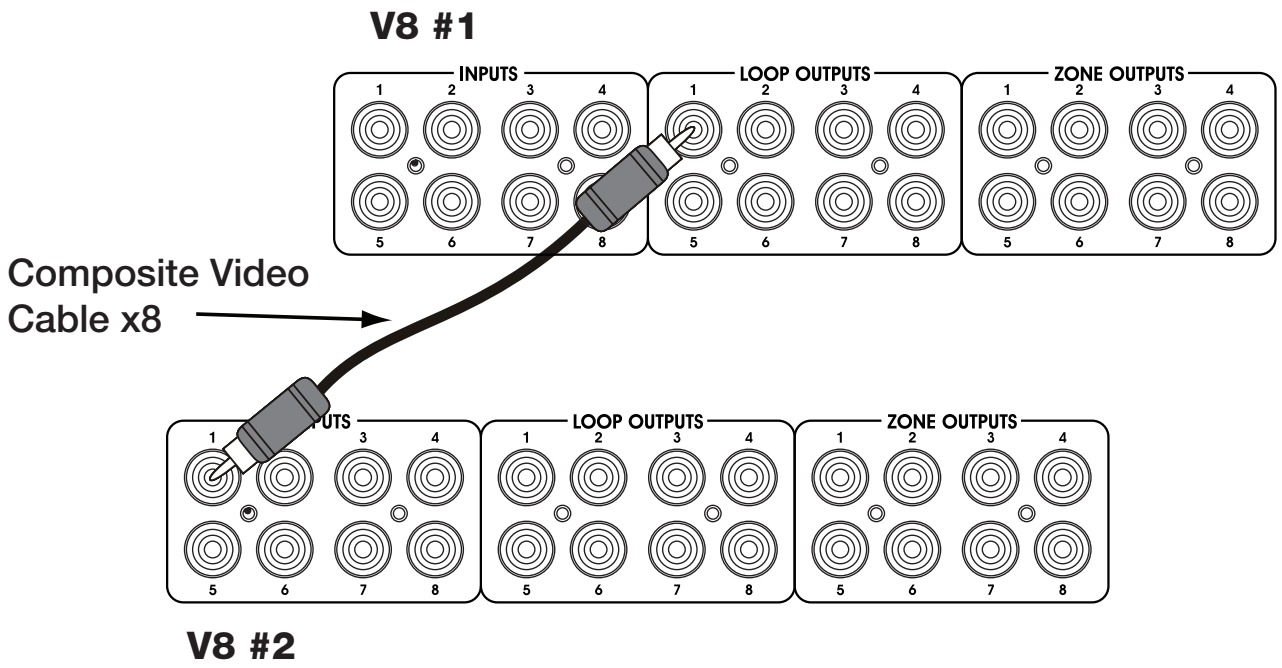



*Figure 3-8: Loop Outputs*


© ELAN Home Systems 2009 • All rights reserved.

## RS232

Connect a DB-9 serial cable between V8 chassis #1 and V8 #2 when controlling multiple units using RS-232 serial communications. Follow this pattern through V8 #4, if applicable.

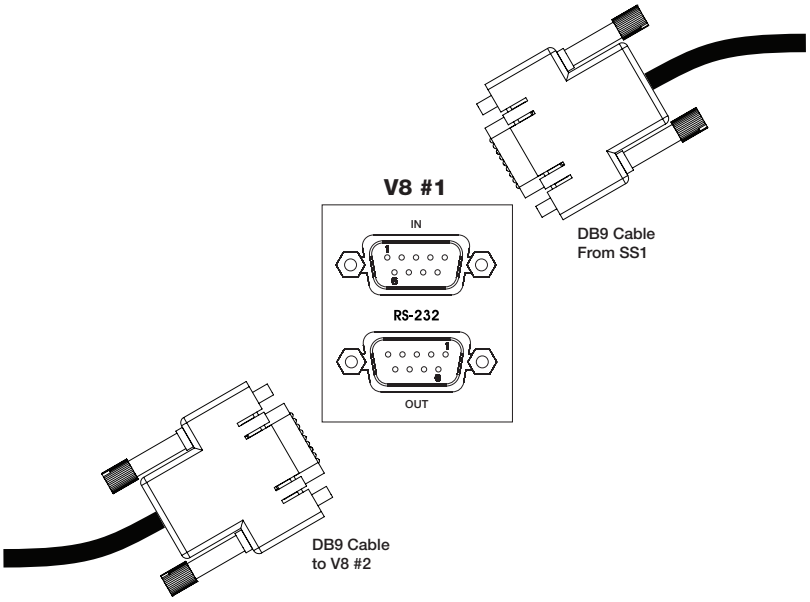



*Figure 3-9: RS232 Multi-Chassis Connection*

## VIANET

Use the VIANET ports when controlling the V8 with ELAN ELAN Touch Panels, SC-1 Serial Controller, SS1 System Station and other VIANET devices. Use of this method ensures highly reliable control signal integrity and removes the possibility of IR signal "collision" whereby simultaneous IR commands cancel each other. The VIANET ports on the V8 can be daisy-chained between chassis and other VIANET devices.

Connect an RJ-45 to RJ-45 interconnect cable from V8 #1 to V8 #2. If the cable assembly is to be custom made, refer to the pin-out diagram below. Follow this pattern through V8 #4, if applicable.

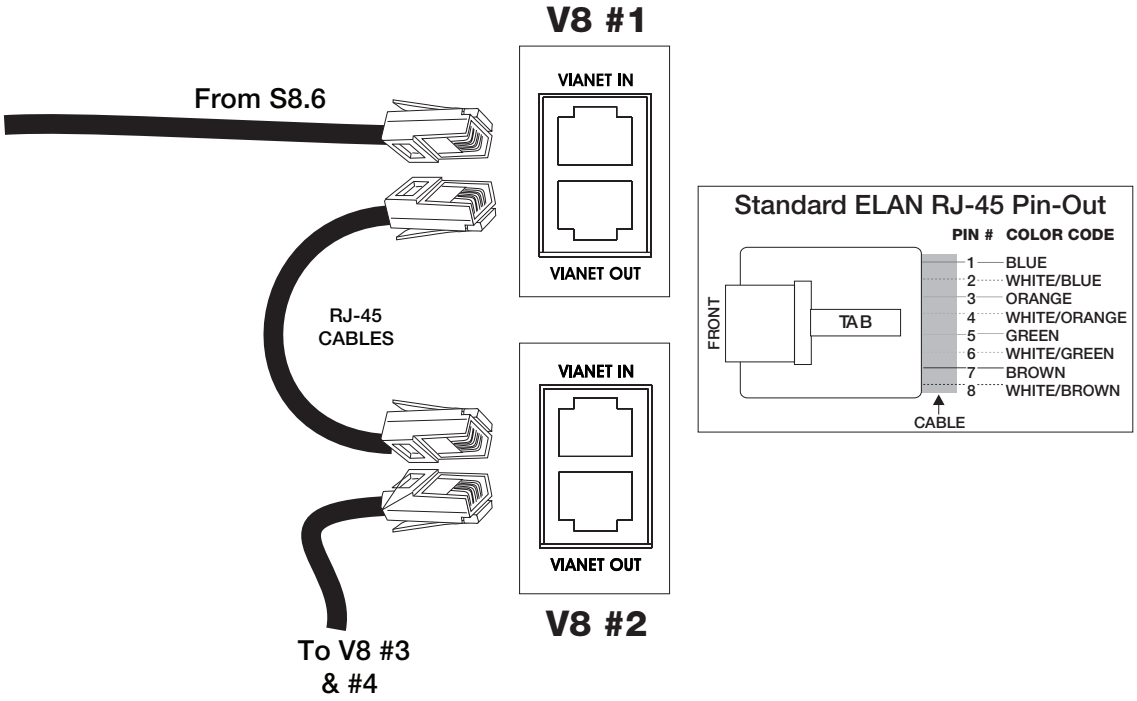



*Figure 3-10: VIANET Connections*

© ELAN Home Systems 2009 • All rights reserved.

# Chapter 4: Operations & Settings

## DIP Switch Settings - UNIT ID

Consult the chart below to determine the correct UNIT ID DIP switch settings. These settings determine which output commands a particular unit responds to. V8s set to UNIT ID 1 will respond to commands specifying Outputs 1-8, UNIT ID 2 responds to commands specifying Outputs 9-16, etc.

| Unit ID | Zones | Switch #1 | Switch #2 |
|---|---|---|---|
| 1 | 1-8 | OFF/UP | OFF/UP |
| 2 | 9-16 | OFF/UP | ON/DOWN |
| 3 | 17-24 | ON/DOWN | OFF/UP |
| 4 | 25-32 | ON/DOWN | ON/DOWN |

*Table 4-1: Unit ID Settings*

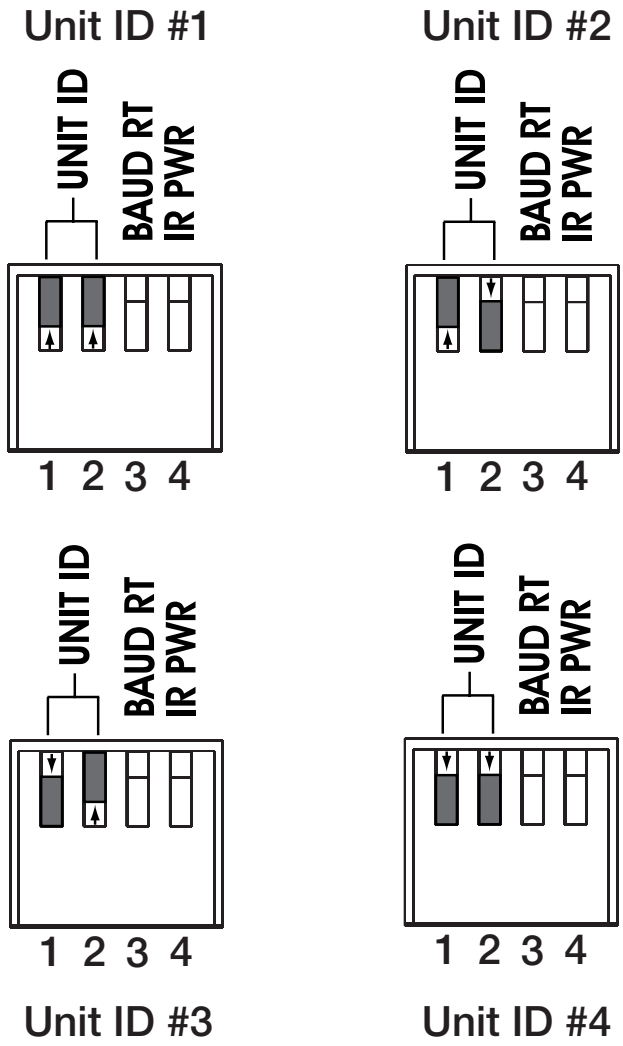



*Figure 4-1: Unit ID Settings*


© ELAN Home Systems 2009 • All rights reserved.

## Front Panel Unit ID Designations

The Output/Input LED indicators on the front panel display the V8's chassis designation. A decimal point located next to the digit in the display window indicates the Unit ID for each chassis. Chassis 1 by default would not display any decimal points as shown in ***Figure 4-2***. A dash in the Input window indicates the Output is OFF or "Video Mute".

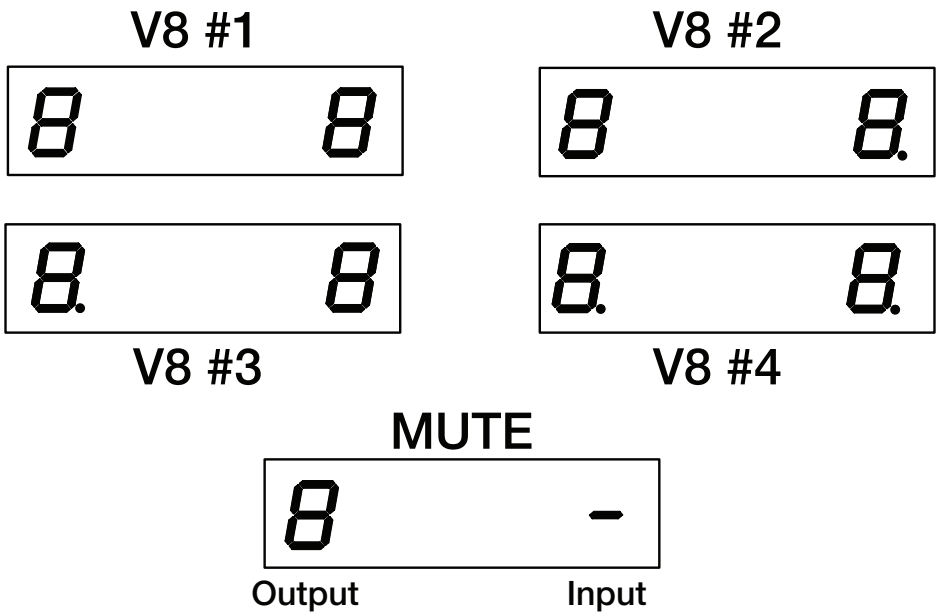



***Figure 4-2: Front Panel Unit ID Designations***

## DIP Switch Settings - BAUD RATE

Set the BAUD RATE DIP switch (#3) to the 9600 position (Up) when utilizing RS-232 controllers that require this baud rate. Use the 19.2k (Down) position for ELAN RS-232 applications and third party controllers that operate at 19.2k.

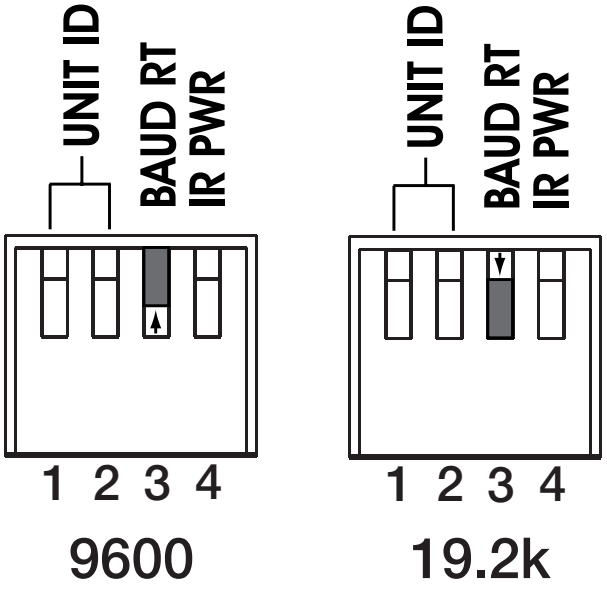



***Figure 4-3: Baud Rate Designations***

© ELAN Home Systems 2009 • All rights reserved.

## IR PWR DIP Settings

When powering external IR Receivers such as the ELAN IRS5, enable (DOWN) the IR PWR DIP Switch (#4). When not using an external IR Receiver, the DIP switch should remain in the factory default position (UP).

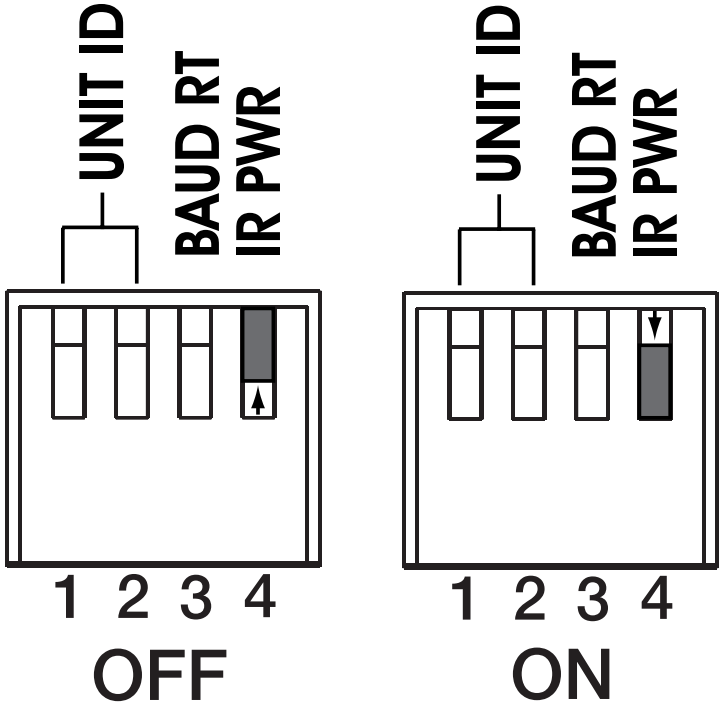



*Figure 4-4: IR PWR DIP Settings*


© ELAN Home Systems 2009 • All rights reserved.

# Chapter 5: Troubleshooting

*Table 5-1: General*

| Symptom | Possible Cause | Solution |
|---|---|---|
| No power up. | 1. No AC power. | 1. a.Check Power switch.<br>b.Connect Power Cord to AC outlet.<br>c.Check AC circuit breaker. |
| | 2. Blown fuse. | 2. Replace with 200 mA fuse. |

*Table 5-2: IR Control*

| Symptom | Possible Cause | Solution |
|---|---|---|
| No source or zone selected from IR controller (keypad, hand-held remote, etc.). IR LED does NOT flash when button pressed. | 1. IR controller not programmed.<br>2. IR signal path wiring bad. | Program IR controller.<br>Verify IR signal path wiring. Check keypads, IR sensors, IR distribution blocks, V8 IR Input jack, IR emitters, etc. |
| No source or zone selected from IR controller (keypad, hand-held remote, etc.). IR LED DOES flash when button pressed. | 1. Incorrect IR commands programmed (not V8 commands).<br>2. UNIT ID DIP switches incorrect. | Verify/correct IR programming.<br>Verify/correct DIP switches. |
| Intermittant or no source or zone control from IR controller (keypad, hand-held remote, etc.). IR LED flickers or is lit constantly. | IR flooding. | Check IR receivers for ambient light or plasma TV flooding. |
| Incorrect source and/or zone selected. | Incorrect V8 IR commands programmed. | Verify/correct IR programming. |

*Table 5-3: RS 232 Control*

| Symptom | Possible Cause | Solution |
|---|---|---|
| No source or zone selected from RS-232 controller. | 1. RS-232 controller incorrectly programmed.<br>2. RS-232 signal path wiring bad.<br>3. UNIT ID DIP switches incorrect.<br>4. BAUD RATE switches incorrect. | Verify/correct programming.<br>Verify RS-232 wiring. Check wire integrity an pin-out configuration.<br>Verify/correct DIP switches.<br>Verify/correct DIP switches. |
| Incorrect source and/or zone selected. | The V8 RS-232 commands were incorrectly programmed. | Verify/correct programming. |

© ELAN Home Systems 2009 • All rights reserved.

| Symptom | Possible Cause | Solution |
|---|---|---|
| Acknowledgement &V8,ACK,xxx<CR> is not received within 200ms | 1. The command was formatted incorrectly. | Verify/correct programming. |
| | 2. An error has occurred in the V8. | Turn unit OFF, then back ON. |
| | 3. Serial cable not connected or defective. | Connect or replace serial cable. |
| | 4. V8 does not have power. | Connect power, check breakers. |

*Table 5-4: VIANET Control*

| Symptom | Possible Cause | Solution |
|---|---|---|
| No source or zone selected from VIANET controller (ELAN Touch Panel, etc.). | 1. VIANET controller not programmed. | Program VIANET controller. |
| | 2. VIANET signal path wiring bad. | Verify VIANET wiring. |
| | 3. UNIT ID DIP switches incorrect. | Verify/correct DIP switches. |
| Incorrect source and/or zone selected. | Incorrect V8 VIANET commands programmed. | Verify/correct programming. |

*Table 5-5: Video Switching*

| Symptom | Possible Cause | Solution |
|---|---|---|
| Video does not appear on desired TV/monitor. Front of V8 displays correct source/zone. | 1. V8 output cables incorrectly routed. TV/monitor connected to incorrect output | Verify/correct video output wiring. |
| | 2. TV/monitor has incorrect input selected. | Select correct video input on TV/monitor. |
| | 3. Video wiring bad/damaged. | Verify/correct video wiring. |
| | 4. Video source not sending video (not connected, playing, or turned on). | Verify/correct video source problem. |
| Incorrect source displays on TV/monitor. Front of V8 displays correct source/zone. | V8 input cables incorrectly routed. Source connected to incorrect V8 input. | Verify/correct video input wiring. |
| Incorrect source displays on TV/monitor. Front of V8 displays incorrect source/zone. | Incorrect programming. | Verify/correct IR programming. |


© ELAN Home Systems 2009 • All rights reserved.

| Symptom | Possible Cause | Solution |
|---|---|---|
| Video image is not optimal (i.e., fuzzy, blurry, smeared, ghosted, or dull). | 1. In-house video wiring picking up noise from high-voltage lines or other source of interference. | Do not run video wiring near AC lines. If necessary, cross AC lines at 90 degrees. |
| | 2. In-house coax runs have sharp bends or using poor quality cable. | Make gradual bends in coax when running wire. Use high-quality RG-6 coaxial cable. |
| | 3. Video wiring bad/damaged. | Verify/correct video wiring. |

## Technical Support

If, after carefully following the steps in the **Troubleshooting** section, you are unable to resolve issues with the installation or operation of the V8, please call ELAN Technical Support at 1-800-622-ELAN (3526).

© ELAN Home Systems 2009 • All rights reserved.

# Appendix A: Specifications

| | |
|---|---|
| **Video Section** | |
| Inputs<br><br>Composite Video | RCA Type Connectors<br><br>(8) 1V p-p Nominal |
| Input Impedance | 75 Ohms |
| **Outputs** | |
| Composite Video | (8) |
| Buffered Loop Video | (8) |
| Video Gain | 0 dB Nominal |
| Gain Flatness | 17 MHz, 0.1dB min. |
| Bandwidth | 45 MHz, -3dB min. |
| Chrominance to Lum. Delay | <20 ns |
| S / N Ratio | >65dB |
| Differential Phase | <0.6 deg |
| Differential Gain | <0.4% |
| Short Time Distortions | 1 NRE |
| Crosstalk | >70dB |
| **Control Ports** | |
| IR Input/Output port | 3.5mm stereo jack (Tip-IR, Ring-Ground, Sleeve-+12V) |
| IR Output port | 3.5mm mono jack (Tip-IR, Sleeve-Ground) |
| RS-232 In/Thru ports | (2) DB9 ports |
| VIANET In/Thru ports | (2) RJ45 |
| **Power** | |
| AC Power Requirements | 120 VAC, 20 Watts (V8)<br>230 VAC, 20 Watts (V8-240) |
| **Dimensions/Weight** | |
| Dimensions w/ Feet (1U w/o Feet) | 17 W X 2 3/8 H X 14 D (in.)<br>432 W X 60 H X 356 D (mm) |
| Weight | 10 lbs/4.5 kg |


© ELAN Home Systems 2009 • All rights reserved.

# Appendix B: Rack Mounting

## Rack-Mount Brackets

When mounting the V8 Video Controller in an equipment rack, use the included rack mount brackets for secure mounting and proper ventilation. The V8 requires one rack space. To install the V8 into a standard 19" equipment rack:

1. Mount the brackets onto the V8 chassis from the front (***Figure B-1***).

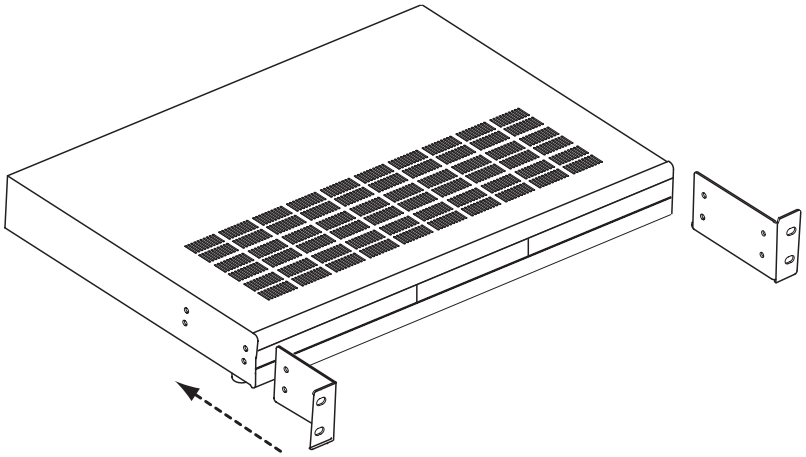


***Figure B-1***

2. Ensure that the brackets are flush with the front of the V8. Install each of the eight screws (included) through the side mounting flanges into the holes in the sides of the unit as shown in ***Figure B-2***. Hand tighten screws! Over-tightening could cause damage to the V8 Video Controller.

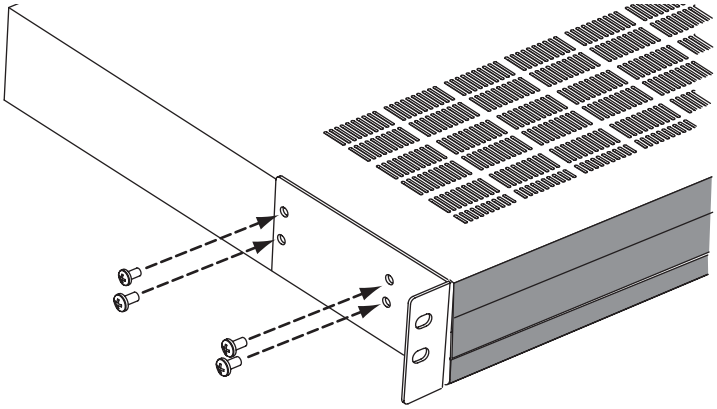


***Figure B-2***

3. Once the brackets are securely mounted, install the entire assembly into a standard 19" equipment rack from the front using four rack screws (not included).

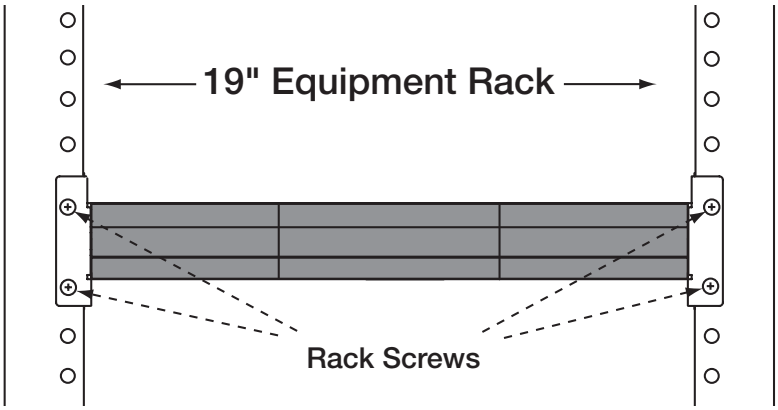



***Figure B-3***

© ELAN Home Systems 2009 • All rights reserved.

# Appendix C: Programming

Use the ELAN configuration software to assign commands to ELAN Wireless Touchpanels, ELAN Touch Panels, and Olé Touch Pads. When programming ELAN user interfaces, the software will automatically configure the video switching commands. Please consult the configuration software and the Help file for specific programming steps and full IR, VIANET, and RS-232 code sets.

## Control Methods

There are three methods of controlling the V8:

- **IR**
- **VIANET**
- **RS-232**

Overall system configuration and design goals will determine which programming method should be used.

### IR

Use IR commands when controlling the V8 with ELAN keypads or hand-held remote controls.

### VIANET

Use VIANET commands when controlling the V8 with ELAN Touch Panels and VIANET devices like the SC1 and SS1 System Station.

### RS-232

Use RS-232 commands when controlling the V from third-party RS-232 controllers or when using a computer to test/verify RS-232 functionality.

**V8 RS-232 Protocol**

The V8 uses the following communications settings:

- **Baud-9.6k or 19.2k** (Default)
- **8 Data Bits**
- **1 Stop Bit**
- **No Parity**
- **Flow Control-None**

**Command Structure**

- **Prefix:** Must be present for every command string (Required)
- **Command:** See list below for all commands (Required)
- **Parameter:** Decimal value of zone/source command
- **Carriage Return:** 0x0d or Decimal 13 (Required)

&V8, cmd, par <cr>

- **&V8,KEY,xxx<CR>** where **xxx** represents the decimal value of the IR command. See the following table for xxx values 000-292.
  - Unit responds with acknowledgement **&V8,ACK,xxx<CR>**
  - Unit will ignore all characters preceding the '**&**'. It will process and **ACK** the command as soon as the carriage return has been received.

Example 1: **&V8,KEY,001,<CR>**
Sets V8 Unit 1 to Output 1, Input 2

Example 2: **&V8,KEY,191,<CR>**
Sets V8 Unit 3 to Output 24, Input 8


© ELAN Home Systems 2009 • All rights reserved.

**Command QRY**

**QRY:** Queries a unit to get the current output to input assignments.
**u: Unit to be queried**

Example : **&V8,QRY,1,<CR>**
Queries V8 Unit 1 for its current output to input assignment

- **(Query) &V8,QRY,u?<CR>** where **u** is the UNIT I.D. (1-4).

The reply to a **QRY** is:

- **(Reply) &V8,QRY,u,abcdefgh<CR>** where **a-h** represents outputs 1-8 the value will be 0-8, 0= OFF.

Example : **&V8,QRY,1,28311140<CR>**
The reply is:
Unit 1
Output 1, Input 2
Output 2, Input 8
Output 3, Input 3
Output 4, Input 1
Output 5, Input 1
Output 6, Input 1
Output 7, Input 4
Output 8, Input 0 = OFF

**Note:** ***The V8 requires at least 50ms between each serial command transmitted to it. However, if the &V8,ACK,xxx<CR> is received prior to 50ms, another command can be transmitted immediately.***

© ELAN Home Systems 2009 • All rights reserved.

# RS-232 Command List

| DESCRIPTION | DEC | DESCRIPTION | DEC | DESCRIPTION | DEC |
|---|---|---|---|---|---|
| OUTPUT1 INPUT1 | 000 | OUTPUT9 INPUT1 | 064 | OUTPUT17 INPUT1 | 128 |
| OUTPUT1 INPUT2 | 001 | OUTPUT9 INPUT2 | 065 | OUTPUT17 INPUT2 | 129 |
| OUTPUT1 INPUT3 | 002 | OUTPUT9 INPUT3 | 066 | OUTPUT17 INPUT3 | 130 |
| OUTPUT1 INPUT4 | 003 | OUTPUT9 INPUT4 | 067 | OUTPUT17 INPUT4 | 131 |
| OUTPUT1 INPUT5 | 004 | OUTPUT9 INPUT5 | 068 | OUTPUT17 INPUT5 | 132 |
| OUTPUT1 INPUT6 | 005 | OUTPUT9 INPUT6 | 069 | OUTPUT17 INPUT6 | 133 |
| OUTPUT1 INPUT7 | 006 | OUTPUT9 INPUT7 | 070 | OUTPUT17 INPUT7 | 134 |
| OUTPUT1 INPUT8 | 007 | OUTPUT9 INPUT8 | 071 | OUTPUT17 INPUT8 | 135 |
| OUTPUT2 INPUT1 | 008 | OUTPUT10 INPUT1 | 072 | OUTPUT18 INPUT1 | 136 |
| OUTPUT2 INPUT2 | 009 | OUTPUT10 INPUT2 | 073 | OUTPUT18 INPUT2 | 137 |
| OUTPUT2 INPUT3 | 010 | OUTPUT10 INPUT3 | 074 | OUTPUT18 INPUT3 | 138 |
| OUTPUT2 INPUT4 | 011 | OUTPUT10 INPUT4 | 075 | OUTPUT18 INPUT4 | 139 |
| OUTPUT2 INPUT5 | 012 | OUTPUT10 INPUT5 | 076 | OUTPUT18 INPUT5 | 140 |
| OUTPUT2 INPUT6 | 013 | OUTPUT10 INPUT6 | 077 | OUTPUT18 INPUT6 | 141 |
| OUTPUT2 INPUT7 | 014 | OUTPUT10 INPUT7 | 078 | OUTPUT18 INPUT7 | 142 |
| OUTPUT2 INPUT8 | 015 | OUTPUT10 INPUT8 | 079 | OUTPUT18 INPUT8 | 143 |
| OUTPUT3 INPUT1 | 016 | OUTPUT11 INPUT1 | 080 | OUTPUT19 INPUT1 | 144 |
| OUTPUT3 INPUT2 | 017 | OUTPUT11 INPUT2 | 081 | OUTPUT19 INPUT2 | 145 |
| OUTPUT3 INPUT3 | 018 | OUTPUT11 INPUT3 | 082 | OUTPUT19 INPUT3 | 146 |
| OUTPUT3 INPUT4 | 019 | OUTPUT11 INPUT4 | 083 | OUTPUT19 INPUT4 | 147 |
| OUTPUT3 INPUT5 | 020 | OUTPUT11 INPUT5 | 084 | OUTPUT19 INPUT5 | 148 |
| OUTPUT3 INPUT6 | 021 | OUTPUT11 INPUT6 | 085 | OUTPUT19 INPUT6 | 149 |
| OUTPUT3 INPUT7 | 022 | OUTPUT11 INPUT7 | 086 | OUTPUT19 INPUT7 | 150 |
| OUTPUT3 INPUT8 | 023 | OUTPUT11 INPUT8 | 087 | OUTPUT19 INPUT8 | 151 |
| OUTPUT4 INPUT1 | 024 | OUTPUT12 INPUT1 | 088 | OUTPUT20 INPUT1 | 152 |
| OUTPUT4 INPUT2 | 025 | OUTPUT12 INPUT2 | 089 | OUTPUT20 INPUT2 | 153 |
| OUTPUT4 INPUT3 | 026 | OUTPUT12 INPUT3 | 090 | OUTPUT20 INPUT3 | 154 |
| OUTPUT4 INPUT4 | 027 | OUTPUT12 INPUT4 | 091 | OUTPUT20 INPUT4 | 155 |
| OUTPUT4 INPUT5 | 028 | OUTPUT12 INPUT5 | 092 | OUTPUT20 INPUT5 | 156 |
| OUTPUT4 INPUT6 | 029 | OUTPUT12 INPUT6 | 093 | OUTPUT20 INPUT6 | 157 |
| OUTPUT4 INPUT7 | 030 | OUTPUT12 INPUT7 | 094 | OUTPUT20 INPUT7 | 158 |
| OUTPUT4 INPUT8 | 031 | OUTPUT12 INPUT8 | 095 | OUTPUT20 INPUT8 | 159 |
| OUTPUT5 INPUT1 | 032 | OUTPUT13 INPUT1 | 096 | OUTPUT21 INPUT1 | 160 |
| OUTPUT5 INPUT2 | 033 | OUTPUT13 INPUT2 | 097 | OUTPUT21 INPUT2 | 161 |
| OUTPUT5 INPUT3 | 034 | OUTPUT13 INPUT3 | 098 | OUTPUT21 INPUT3 | 162 |
| OUTPUT5 INPUT4 | 035 | OUTPUT13 INPUT4 | 099 | OUTPUT21 INPUT4 | 163 |
| OUTPUT5 INPUT5 | 036 | OUTPUT13 INPUT5 | 100 | OUTPUT21 INPUT5 | 164 |
| OUTPUT5 INPUT6 | 037 | OUTPUT13 INPUT6 | 101 | OUTPUT21 INPUT6 | 165 |
| OUTPUT5 INPUT7 | 038 | OUTPUT13 INPUT7 | 102 | OUTPUT21 INPUT7 | 166 |
| OUTPUT5 INPUT8 | 039 | OUTPUT13 INPUT8 | 103 | OUTPUT21 INPUT8 | 167 |
| OUTPUT6 INPUT1 | 040 | OUTPUT14 INPUT1 | 104 | OUTPUT22 INPUT1 | 168 |
| OUTPUT6 INPUT2 | 041 | OUTPUT14 INPUT2 | 105 | OUTPUT22 INPUT2 | 169 |
| OUTPUT6 INPUT3 | 042 | OUTPUT14 INPUT3 | 106 | OUTPUT22 INPUT3 | 170 |
| OUTPUT6 INPUT4 | 043 | OUTPUT14 INPUT4 | 107 | OUTPUT22 INPUT4 | 171 |
| OUTPUT6 INPUT5 | 044 | OUTPUT14 INPUT5 | 108 | OUTPUT22 INPUT5 | 172 |
| OUTPUT6 INPUT6 | 045 | OUTPUT14 INPUT6 | 109 | OUTPUT22 INPUT6 | 173 |
| OUTPUT6 INPUT7 | 046 | OUTPUT14 INPUT7 | 110 | OUTPUT22 INPUT7 | 174 |
| OUTPUT6 INPUT8 | 047 | OUTPUT14 INPUT8 | 111 | OUTPUT22 INPUT8 | 175 |
| OUTPUT7 INPUT1 | 048 | OUTPUT15 INPUT1 | 112 | OUTPUT23 INPUT1 | 176 |
| OUTPUT7 INPUT2 | 049 | OUTPUT15 INPUT2 | 113 | OUTPUT23 INPUT2 | 177 |
| OUTPUT7 INPUT3 | 050 | OUTPUT15 INPUT3 | 114 | OUTPUT23 INPUT3 | 178 |
| OUTPUT7 INPUT4 | 051 | OUTPUT15 INPUT4 | 115 | OUTPUT23 INPUT4 | 179 |
| OUTPUT7 INPUT5 | 052 | OUTPUT15 INPUT5 | 116 | OUTPUT23 INPUT5 | 180 |
| OUTPUT7 INPUT6 | 053 | OUTPUT15 INPUT6 | 117 | OUTPUT23 INPUT6 | 181 |
| OUTPUT7 INPUT7 | 054 | OUTPUT15 INPUT7 | 118 | OUTPUT23 INPUT7 | 182 |
| OUTPUT7 INPUT8 | 055 | OUTPUT15 INPUT8 | 119 | OUTPUT23 INPUT8 | 183 |
| OUTPUT8 INPUT1 | 056 | OUTPUT16 INPUT1 | 120 | OUTPUT24 INPUT1 | 184 |
| OUTPUT8 INPUT2 | 057 | OUTPUT16 INPUT2 | 121 | OUTPUT24 INPUT2 | 185 |
| OUTPUT8 INPUT3 | 058 | OUTPUT16 INPUT3 | 122 | OUTPUT24 INPUT3 | 186 |
| OUTPUT8 INPUT4 | 059 | OUTPUT16 INPUT4 | 123 | OUTPUT24 INPUT4 | 187 |
| OUTPUT8 INPUT5 | 060 | OUTPUT16 INPUT5 | 124 | OUTPUT24 INPUT5 | 188 |
| OUTPUT8 INPUT6 | 061 | OUTPUT16 INPUT6 | 125 | OUTPUT24 INPUT6 | 189 |
| OUTPUT8 INPUT7 | 062 | OUTPUT16 INPUT7 | 126 | OUTPUT24 INPUT7 | 190 |
| OUTPUT8 INPUT8 | 063 | OUTPUT16 INPUT8 | 127 | OUTPUT24 INPUT8 | 191 |


© ELAN Home Systems 2009 • All rights reserved.

| DESCRIPTION | DEC | DESCRIPTION | DEC |
|---|---|---|---|
| OUTPUT25 INPUT1 | 192 | OUTPUT1 OFF | 256 |
| OUTPUT25 INPUT2 | 193 | OUTPUT2 OFF | 257 |
| OUTPUT25 INPUT3 | 194 | OUTPUT3 OFF | 258 |
| OUTPUT25 INPUT4 | 195 | OUTPUT4 OFF | 259 |
| OUTPUT25 INPUT5 | 196 | OUTPUT5 OFF | 260 |
| OUTPUT25 INPUT6 | 197 | OUTPUT6 OFF | 261 |
| OUTPUT25 INPUT7 | 198 | OUTPUT7 OFF | 262 |
| OUTPUT25 INPUT8 | 199 | OUTPUT8 OFF | 263 |
| OUTPUT26 INPUT1 | 200 | OUTPUT9 OFF | 264 |
| OUTPUT26 INPUT2 | 201 | OUTPUT10 OFF | 265 |
| OUTPUT26 INPUT3 | 202 | OUTPUT11 OFF | 266 |
| OUTPUT26 INPUT4 | 203 | OUTPUT12 OFF | 267 |
| OUTPUT26 INPUT5 | 204 | OUTPUT13 OFF | 268 |
| OUTPUT26 INPUT6 | 205 | OUTPUT14 OFF | 269 |
| OUTPUT26 INPUT7 | 206 | OUTPUT15 OFF | 270 |
| OUTPUT26 INPUT8 | 207 | OUTPUT16 OFF | 271 |
| OUTPUT27 INPUT1 | 208 | OUTPUT17 OFF | 272 |
| OUTPUT27 INPUT2 | 209 | OUTPUT18 OFF | 273 |
| OUTPUT27 INPUT3 | 210 | OUTPUT19 OFF | 274 |
| OUTPUT27 INPUT4 | 211 | OUTPUT20 OFF | 275 |
| OUTPUT27 INPUT5 | 212 | OUTPUT21 OFF | 276 |
| OUTPUT27 INPUT6 | 213 | OUTPUT22 OFF | 277 |
| OUTPUT27 INPUT7 | 214 | OUTPUT23 OFF | 278 |
| OUTPUT27 INPUT8 | 215 | OUTPUT24 OFF | 279 |
| OUTPUT28 INPUT1 | 216 | OUTPUT25 OFF | 280 |
| OUTPUT28 INPUT2 | 217 | OUTPUT26 OFF | 281 |
| OUTPUT28 INPUT3 | 218 | OUTPUT27 OFF | 282 |
| OUTPUT28 INPUT4 | 219 | OUTPUT28 OFF | 283 |
| OUTPUT28 INPUT5 | 220 | OUTPUT29 OFF | 284 |
| OUTPUT28 INPUT6 | 221 | OUTPUT30 OFF | 285 |
| OUTPUT28 INPUT7 | 222 | OUTPUT31 OFF | 286 |
| OUTPUT28 INPUT8 | 223 | OUTPUT32 OFF | 287 |
| OUTPUT29 INPUT1 | 224 | ALL OUTPUTS OFF | 288 |
| OUTPUT29 INPUT2 | 225 | ALL UNIT 1 OFF | 289 |
| OUTPUT29 INPUT3 | 226 | ALL UNIT 2 OFF | 290 |
| OUTPUT29 INPUT4 | 227 | ALL UNIT 3 OFF | 291 |
| OUTPUT29 INPUT5 | 228 | ALL UNIT 4 OFF | 292 |
| OUTPUT29 INPUT6 | 229 | | |
| OUTPUT29 INPUT7 | 230 | | |
| OUTPUT29 INPUT8 | 231 | | |
| OUTPUT30 INPUT1 | 232 | | |
| OUTPUT30 INPUT2 | 233 | | |
| OUTPUT30 INPUT3 | 234 | | |
| OUTPUT30 INPUT4 | 235 | | |
| OUTPUT30 INPUT5 | 236 | | |
| OUTPUT30 INPUT6 | 237 | | |
| OUTPUT30 INPUT7 | 238 | | |
| OUTPUT30 INPUT8 | 239 | | |
| OUTPUT31 INPUT1 | 240 | | |
| OUTPUT31 INPUT2 | 241 | | |
| OUTPUT31 INPUT3 | 242 | | |
| OUTPUT31 INPUT4 | 243 | | |
| OUTPUT31 INPUT5 | 244 | | |
| OUTPUT31 INPUT6 | 245 | | |
| OUTPUT31 INPUT7 | 246 | | |
| OUTPUT31 INPUT8 | 247 | | |
| OUTPUT32 INPUT1 | 248 | | |
| OUTPUT32 INPUT2 | 249 | | |
| OUTPUT32 INPUT3 | 250 | | |
| OUTPUT32 INPUT4 | 251 | | |
| OUTPUT32 INPUT5 | 252 | | |
| OUTPUT32 INPUT6 | 253 | | |
| OUTPUT32 INPUT7 | 254 | | |
| OUTPUT32 INPUT8 | 255 | | |

© ELAN Home Systems 2009 • All rights reserved.

# Appendix D: Digital Audio Switching (SPDIF)

The V8 can also be used as a matrix switcher for SPDIF digital audio. Use a Digital Coaxial cable to connect a video source such as a DVD player with a Digital Coaxial output to the V8's Input as shown below. Digital audio outputs will typically be sent via RG-6 coaxial cable from the head-end to surround sound receivers located throughout the house. Use an F-to-RCA barrel connector to terminate the RG-6 cable to Digital Coaxial connecting cables.

***Note: Maximum coaxial wire run is 300 feet.***

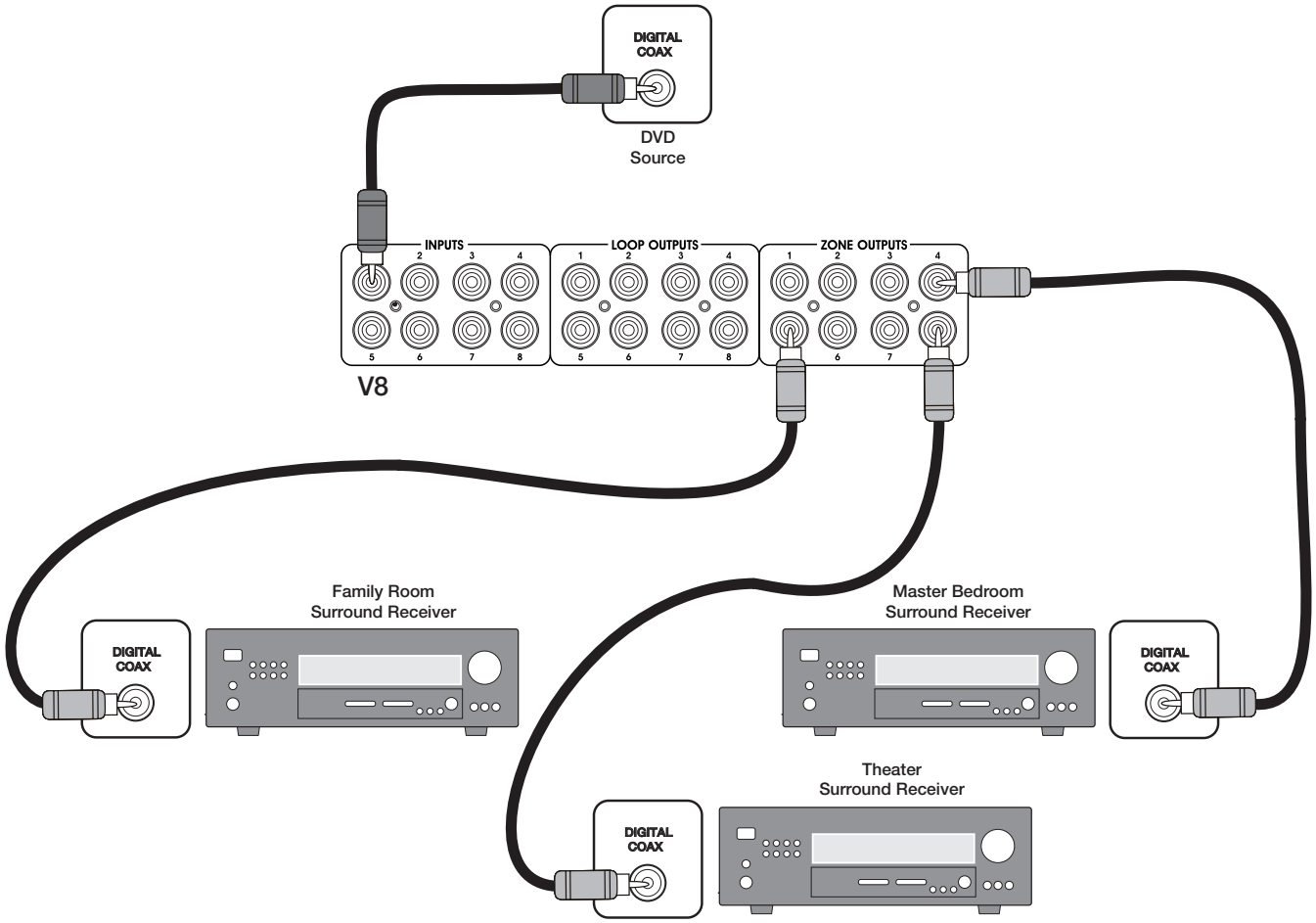



***Figure D-1: Digital Audio Application***


© ELAN Home Systems 2009 • All rights reserved.

# Notes:

© ELAN Home Systems 2009 • All rights reserved.

# Notes:


© ELAN Home Systems 2009 • All rights reserved.

# Limited Warranty

ELAN HOME SYSTEMS L.L.C. (“ELAN”) warrants the ELAN V8 Video Controller to be free from defects in materials and workmanship for the period of two years (2 years) from date of purchase. If within the applicable warranty period above purchaser discovers that such item was not as warranted above and promptly notifies ELAN in writing, ELAN shall repair or replace the item at the company’s option. This warranty shall not apply (a) to equipment not manufactured by ELAN, (b) to equipment which shall have been installed by other than an ELAN authorized installer, (c) to installed equipment which is not installed to ELAN’s specifications, (d) to equipment which shall have been repaired or altered by others than ELAN, (e) to equipment which shall have been subjected to negligence, accident, or damage by circumstances beyond ELAN’s control, including, but not limited to, lightning, flood, electrical surge, tornado, earthquake, or other catastrophic events beyond ELAN’s control, or to improper operation, maintenance or storage, or to other than normal use of service. With respect to equipment sold by, but not manufactured by ELAN, the warranty obligations of ELAN shall in all respects conform to the warranty actually extended to ELAN by its supplier. The foregoing warranties do not cover reimbursement for labor, transportation, removal, installation or other expenses which may be incurred in connection with repair or replacement.

Except as may be expressly provided and authorized in writing by ELAN, ELAN shall not be subject to any other obligations or liabilities whatsoever with respect to equipment manufactured by ELAN or services rendered by ELAN.

THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESSED AND IMPLIED WARRANTIES EXCEPT WARRANTIES OF TITLE, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

ATTENTION: TO OUR VALUED CONSUMERS

To ensure that consumers obtain quality pre-sale and after-sale support and service, ELAN Home Systems products are sold exclusively through authorized dealers. ELAN products are not sold online. The warranties on ELAN products are NOT VALID if the products have been purchased from an unauthorized dealer or an online E-tailer. To determine if your ELAN reseller is authorized, please contact ELAN Home Systems at (859) 269-7760.
www.elanhomesystems.com

ELAN®
HOME SYSTEMS

www.elanhomesystems.com
Lexington, KY

P/N 9901005 REV: B